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10/080,995	02/20/2002	Huizhao Wang	CISCP263/4714	1315
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BEYER WEAVER LLP			EXAMINER	
P.O. BOX 70250			RYMAN, DANIEL J	
OAKLAND, CA 94612-0250				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/080,995

Applicant(s)

WANG ET AL.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-43 is/are pending in the application.
- 4a) Of the above claim(s) 18-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-17 is/are rejected.
- 7) ☒ Claim(s) 7 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Examiner acknowledges Applicant's filing of an RCE on 9 May 2007.
2. Applicant's arguments with respect to claims 1-7 and 9-17 have been considered but are moot in view of the new ground(s) of rejection.
3. While Applicant's arguments filed 9 May 2007 are moot in view of the new grounds of rejection, Examiner will nonetheless respond to Applicant's arguments with respect to the combination of Heller and Zhang, since claims 15 and 17 are rejected in view of the combination of Heller and Zhang.
4. On page 16 of the Response, Applicant asserts that "Zhang neither discloses nor suggests transmitting access point information identifying an access point subnet and a gateway among access points to notify the access points of those access points that are active (or no longer active)." Applicant's assertion is based on the fact that "the cache entries [of Zhang] that are copied do not include location information such as HLR or VLR information [i.e. access point information]." In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Heller provides the teaching of the claimed "access point information." Zhang provides teachings regarding a mechanism for updating information in databases in access points. As such, it does not matter whether or not Zhang teaches that the updated information is the claimed "access point information" since Heller teaches the use of claimed "access point information." Simply, it is the

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combination of Heller and Zhang that teaches “transmitting access point information identifying an access point subnet and a gateway among access points to notify the access points of those access points that are active (or no longer active),” rather than Zhang individually.

5. In view of the foregoing, Examiner maintains that claims 15 and 17 are obvious in view of the cited prior art.

### ***Claim Objections***

6. Claim 7 is objected to because of the following informalities: in line 3, “a list of active access points” should be “the list of active access points”. Appropriate correction is required.

7. Claim 9 is objected to because of the following informalities: claim 9 depends upon claim 8, where claim 8 has been canceled. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-7, 9-14, and 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

10. To comply with the subject matter eligibility requirement of 35 U.S.C. § 101, a claim must pass the following test: (1) Does the claimed invention fall within one of the statutory classes? If not, then the claim is non-statutory. (2) If it does, does the claimed invention fall/cover/include a judicial exception? If not, the claim is statutory. If so, the claim is only statutory if there is a practical application (a) by physical transformation or (b) that produces a useful and tangible result.

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11. In this case, claim 1 (directed to a method) and claims 2-7, 9-14, and 16 (directed to a device) meet Question One since they fall within either the “process” or “machine” statutory classes of 35 U.S.C. § 101. However, these claims fail Question Two since they fall within a judicial exception, i.e. the claims are an attempt to seek patent protection of a computer program in the abstract. This is evidenced by claim 17 which demonstrates that the method and steps implemented by the device are implemented using computer programs. Since the claims are merely trying to claim a “computer code” in the abstract, the claims fall within the “abstract idea” judicial exception.

12. Once the answer to Question Two is “yes,” i.e. the claimed invention falls under a judicial exception, the claimed invention is only statutory if it produces either a practical application by physical transformation or a practical application that produces a useful and tangible result. In this case, there is no practical application by physical transformation since the software does not manipulate any physical structure and since the structure of the machines in each of these claims does not change. In addition, there is no practical application that produces a useful and tangible result since, when implemented in software, the claims never require that a computer execute the software. Therefore, the claims are non-statutory.

13. In order to make these claims statutory, Applicant could amend the claims to turn the method steps into structural limitations, e.g. “means for receiving” or “means for storing”. Applicant could also amend the claims to turn the claims into a purely “software” claim by amending the claims to read, “A computer-readable medium encoded with a data structure [or software] for supporting mobility for a node that does not support Mobile IP.”

***Claim Rejections - 35 USC § 103***

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14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heller (US 2002/0147837), of record, in view of Zhang (USPN 6,810,259), of record.

16. Regarding claims 15 and 17, Heller discloses a first access point that supports mobility for a node that does not support Mobile IP (§ 20, where Heller's invention obviates the need for installing Mobile IP software on mobile nodes, such that the mobile nodes do not support Mobile IP, by using base stations, i.e. access points, that support mobility for a node, see also §§ 16-17), the access point comprising: means for enabling a third access point to compare a received data packet with the access point subnet to determine whether to send a registration request on behalf of the node using the gateway as the node's Home Agent (§ 18, where a base station, i.e. an access point, receives a link layer message, i.e. a data packet, and uses the identity of the MN, i.e. access point subnet (since the address of the MN includes the subnet address of its home access point subnet, § 6), to determine whether to send a registration request on behalf of the node to the node's HA and where the HA is a gateway, as shown in Fig. 3).

Heller does not expressly disclose means for receiving access point information from a second access point; means for storing the access point information such that a list of active access points is updated to include the access point information, the list of active access points including access point information associated with one or more active access points, the access point information including information identifying an access point subnet and a gateway associated with the second

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access point; and means for sending the access point information to a third access point that supports Mobile IP to notify the third access point that the second access point is an active access point, thereby enabling the third access point to perform the registration. However, Heller does disclose that the third access point performs the registration using access point information identifying an access point subnet and a gateway (§ 29, where a base station, i.e. an access point, performs registration on behalf of the node using the identity of the MN, i.e. access point subnet, and an HA address, i.e. a gateway, as shown in Fig. 3). Heller also discloses that the third access point retrieves address information from a database, although Heller fails to specify how the database obtains this address information (§ 18, where the access point “retrieves Mobile IP information from a database based on the identity of the MN,” including “an IP address for each of the MN, FA and HA plus other information needed to perform the mobile IP registration.”).

Zhang teaches, in a mobile communications network, a method for synchronizing distributed caches (col. 11, line 66-col. 12, line 1). This method includes receiving information from a second access point at the first access point (col. 27, lines 14-17, where a first access point, i.e. peer group leader, will receive information, i.e. cache summary, from a second access point, i.e. another peer group leader or a new access point, see also col. 27, lines 55-66); storing the information such that a list of active access points is updated to include the information, the list of active access points including information associated with one or more active access points (col. 27, lines 49-66, where the information is stored in the cache of each access point so that the information in the cache is updated, and col. 10, lines 39-59, where the cache includes a list of active access points, i.e. global/mirror subscriber list, which includes information associated with one or more active access points); and sending the access point information to a third access point to notify the third access point

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that the second access point is an active access point (col. 27, lines 14-17, where the group leader will distribute the new information to its respective peer group members, and col. 27, lines 56-61, where the information notifies the peer group members, i.e. third access point, that the second access point is an active access point). Zhang's invention "provid[es] a location update protocol, which reduces the load on the central server/database" (col. 4, lines 46-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the Heller's access points perform the information transfer of Zhang by receiving access point information from a second access point at the first access point; storing the access point information such that a list of active access points is updated to include the access point information, the list of active access points including access point information associated with one or more active access points; and sending the access point information to a third access point to notify the third access point that the second access point is an active access point. One of ordinary skill in the art at the time of the invention would have been motivated to do this to permit the third access point to obtain the access point information required to perform registration in a manner that reduces load on the central server/database used in a typical system.

With respect to claim 17, Heller in view of Zhang does not expressly disclose computer-readable instructions for implementing the method; however, Examiner takes official notice that it is well known in the art to use software to implement a method since software is more flexible than hardware. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method using software since software is more flexible than hardware.

### ***Conclusion***



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J. Ryman  
Examiner  
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*Daniel Ryman*